

## ABSTRACT

A gas-liquid dissolving apparatus that dissolves an oxygen-containing gas into water taken in from an oxygen-deficient water area, increases a dissolved oxygen concentration of the water, and returns the increased dissolved oxygen concentration water to the oxygen-deficient water area is provided. The apparatus includes a pump 3 that takes in the water from the oxygen-deficient water area, an oxygen supplying unit 4 that supplies the oxygen-containing gas, an elongated cylindrical gas-liquid dissolving chamber 5 that has at least one hole 5b formed in a lower portion and that has a dome-shaped top plate 5a provided in an upper portion, a nozzle 2 that ejects the gas from the oxygen supplying unit 4 and the water from the pump 3 upward so that the gas and the water strike against an inner wall of the top plate 5a of the gas-liquid dissolving chamber 5, that vigorously agitates the gas and the water by forces of the ejected gas and water, and that has a tip end having a tapered inside, a gas-liquid separating chamber 6 that communicates with the gas-liquid dissolving chamber 5 through the hole 5b, and that separates bubbles and the water flowing out from the gas-liquid dissolving chamber 5 through the hole 5b from each other while storing the bubbles and the water, and a water supply port 6b that returns the water separated from the bubbles to the oxygen-deficient water area.